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Serial No.: 09/465,038

FEB 27 2006

RCA89605

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent Application

Inventor : Ronald Thomas Keen  
Serial No. : 09/465,038  
Filed : December 16, 1999  
Title : METHOD FOR REDUCING VISUAL EFFECTS OF  
ARTIFACTS PRESENT IN A LINE SCANNED VIDEO  
DISPLAY  
Examiner : Brian P. Yenke  
Art Unit : 2614

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Patricia A. Verlangieri

APPELLANTS' BRIEF UNDER 37 C.F.R. § 1.192

On September 27, 2005, the Applicants faxed a timely Notice of Appeal (that was received in the United States Patent and Trademark Office on September 27, 2005) from the action of the Examiner finally rejecting all the pending claims. The Applicants herein file this Brief in accordance with 37 C. F. R. § 1.192.

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### **1. IDENTIFICATION OF THE REAL PARTY IN INTEREST**

The real party in interest for the above-identified application is Thomson Inc., which is the assignee of record for this application.

### **2. IDENTIFICATION OF RELATED APPEALS OR INTERFERENCES**

To the best of the applicants' knowledge, there are no appeals or interferences that will be directly affected by, or will have a bearing on the decision of this appeal.

### **3. STATUS OF THE CLAIMS**

The above-identified patent application was filed on December 16, 1999. Claims 1-24 are pending.

In the first Office Action, mailed February 15, 2002 (Paper No. 5), claims 1-24 were rejected.

In appellant's response to the first Office Action, dated May 15, 2002, claims 1-24 were amended.

The Examiner in the second Office Action, mailed August 13, 2002 (Paper No. 7), finally rejected claims 1-24 under 35 U. S. C. § 102 on the basis of newly cited prior art stating that "applicant's amendment necessitated the new ground of rejection".

On January 13, 2003, appellants submitted an amendment along with a Request for Continued Examination (RCE). In the amendment, claims 2-24 were cancelled. Claim 1 was amended and claims 25-26 were added.

The Examiner in the third Office Action, mailed March 27, 2003 (Paper No. 11), rejected claims 1 and 25-26.

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In appellant's response to the third Office Action, mailed June 25, 2003, claim 26 was amended.

The Examiner in a forth Office Action, mailed August 4, 2003 (Paper No. 13), the Examiner finally rejected claims 1 and 25-26.

A first notice of appeal was filed by appellants on November 3, 2003. An appeal brief in support of such notice of appeal was filed on April 5, 2004.

In response to appellant's appeal brief, the Examiner mailed a fifth Office Action on June 15, 2004 (Paper No. 16), the Examiner rejected claims 1 and 25-25.

Appellant's submitted a response to the fifth Office Action on December 15, 2004.

The Examiner in a sixth Office Action, mailed March 29, 2005 (Paper No. 033605), the Examiner finally rejected claims 1 and 25-26.

The status of the claims is as follows:

Twice amended claim 1. Once amended claim 26. A copy of the claims, as amended, is attached as Appendix A. All claims stand finally rejected.

#### **4. STATUS OF THE AMENDMENTS**

No amendments were made to the claims after final rejection. All amendments were entered.

#### **5. SUMMARY OF THE CLAIMED SUBJECT MATTER**

Appellant's invention, as set forth in independent claim 1, is directed to a method for reducing the visual effects of an artifact in a line scan portion of a television display having a scan frequency of  $f_h$ . See appellant's specification at page 2, lines 26-33. The method includes determining if the artifact has a controllable frequency and is attributable to a periodic signal generated in the television display. See appellant's specification at page 3, lines 3-12. If the

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artifact has a controllable frequency and is attributable to a periodic signal generated in the television display, calculating a value for the frequency of the periodic signal to be an odd harmonic of  $f_H/2$ . See appellant's specification at page 3, lines 19-23. Thereafter, the calculated value for the frequency of the periodic signal is rounded to an integer number of kHz. See appellant's specification at page 3, lines 23-26. Finally, the frequency of the periodic signal is set to be equal to the rounded value. See appellant's specification at page 3, lines 19-26.

#### **6. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

1. The Examiner has rejected claims 1 and 25-26 as obvious under 35 U. S. C. § 103(a) over Martinez (U. S. 5,812,184) in view of Henderson et al. (U. S. 4,106,059).

#### **7. ARGUMENT**

1. Rejection of claims 1 and 25-26 under 35 U. S. C. § 103(a) over Martinez (U. S. 5,812,184) in view of Henderson et al. (U. S. 4,106,059).

#### **Claims 1 and 25-26**

Martinez discloses an interactive television and data transmission system (T-NET). See Martinez at column 1, lines 17-19. Martinez adds 2-way communication capability to cable television (CATV) systems. See Martinez at column 2, lines 20-23. FIG. 7 teaches one embodiment in which a viewer's digital response is transmitted during a video portion on one or several pre-assigned TV horizontal scan lines which also carry regular video pictures to the viewer. See Martinez at column 9, lines 28-35. The viewer's response digital data rate must equal an odd harmonic of one-half the standard TV horizontal scan rate. See

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Martinez at column 9, lines 40-43. In a first example, the frequency of the viewer's digital response is at a multiple of 455 times one-half the horizontal scan rate in a frequency of 3.579545 MHz. See Martinez at column 13, lines 57-63. In a second example, the viewer's digital response has a frequency of 2.006118 MHz, which is 255 times one-half the horizontal scan frequency. See Martinez at column 14, lines 59-63. These two examples signify that a frequency with a resolution of at least one Hz because the two calculated frequencies can be specified down to at least the third decimal place for example, as follows: 2,006,118.881 Hz ( $225 \times 0.5 \times 15,734.26573$  Hz) and 3,579,545.454 Hz ( $455 \times 0.5 \times 15,734.26573$  Hz).

In appellant's claims 1 and 25-26, a method is described for reducing the visual effects of an artifact in a line scan portion of a television display having a scan frequency of  $f_h$ . See appellant's specification at page 2, lines 26-33. The method includes determining if the artifact has a controllable frequency and is attributable to a periodic signal generated in the television display. See appellant's specification at page 3, lines 3-12. If the artifact has a controllable frequency and is attributable to a periodic signal generated in the television display, calculating a value for the frequency of the periodic signal to be an odd harmonic of  $f_h/2$ . See appellant's specification at page 3, lines 19-23. Thereafter, the calculated value for the frequency of the periodic signal is rounded to an integer number of kHz. See appellant's specification at page 3, lines 23-26. Finally, the frequency of the periodic signal is set to be equal to the rounded value. See appellant's specification at page 3, lines 19-26.

Martinez does not disclose or suggest a method for reducing the visual effects of an artifact in a line scan portion of a television display having a scan frequency of  $f_h$  by calculating a value for the frequency of the periodic signal to be an odd harmonic of  $f_h/2$ , rounding the calculated value for the frequency of the periodic signal is rounded to an integer number of kHz and setting the frequency of the periodic signal to be equal to the rounded value. In particular, Martinez only teaches that the viewer's response digital data rate must equal an odd

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harmonic of one-half the standard TV horizontal scan rate. Additionally, Martinez teaches away from rounding the calculated frequency to the unit of KHz, which is 1000 times the frequency disclosed therein, by specifying the two frequencies to the unit of Hz.

Henderson et al. discloses a phase locked loop tuner for a television receiver. See Henderson et al. at column 1, lines 8-11. The phase locked loop tuner uses a reference frequency that is an odd harmonic of one-half the horizontal scanning rate and a harmonic of the vertical scanning rate. See Henderson et al. at column 5, lines 45-60.

Henderson et al. does not disclose or suggest a method for reducing the visual effects of an artifact in a line scan portion of a television display having a scan frequency of  $f_h$  by calculating a value for the frequency of the periodic signal to be an odd harmonic of  $f_h/2$ , rounding the calculated value for the frequency of the periodic signal is rounded to an integer number of kHz and setting the frequency of the periodic signal to be equal to the rounded value. Rather, Henderson et al. only teaches use of a phase locked loop tuner having a reference frequency that is an odd harmonic of one-half the horizontal scanning rate and a harmonic of the vertical scanning rate.

Furthermore, since Martinez only teaches that the viewer's response digital data rate must equal an odd harmonic of one-half the standard TV horizontal scan rate and Henderson et al. only teaches use of a phase locked loop tuner having a reference frequency that is an odd harmonic of one-half the horizontal scanning rate and a harmonic of the vertical scanning rate, the combination of these references does not describe or suggest applicant's arrangement recited in claims 1 and 25-26. In particular, claims 1 and 25-26 recite a method for reducing the visual effects of an artifact in a line scan portion of a television display having a scan frequency of  $f_h$  by calculating a value for the frequency of the periodic signal to be an odd harmonic of  $f_h/2$ , rounding the calculated value for the frequency of the periodic signal is rounded to an integer number of kHz and setting the frequency of the periodic signal to be equal to the

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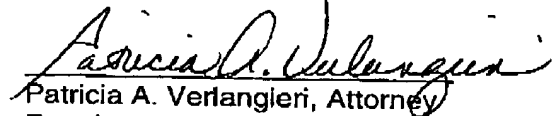
rounded value. Thus, claims 1 and 25-26 are patentable over Martinez in view of Henderson et al. Claims 1 and 25-26 stand or fall alone.

**8. CONCLUSION**

In view of the foregoing arguments, appellants respectfully request that the Examiners' rejection of claims 1 and 25-26 be reversed. Favorable action is respectfully requested.

Respectfully submitted,

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February 27, 2006

Attachments  
Appendix A - Claims 1 and 25-26  
Appendix B - Evidence  
Appendix C - Related Appeals

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## APPENDIX A - CLAIMS

1. In a television receiver having a line scanned video display with a scan frequency  $f_h$ , a method for reducing the visual effects of an artifact in a line scan portion of said video display, comprising the steps of:
  - (i) determining if said artifact is attributable to a periodic signal generated in said television receiver and being of controllable frequency;
  - (ii) calculating a value for the frequency of said periodic signal to be an odd harmonic of  $f_h/2$ ;
  - (iii) rounding the calculated value of said periodic signal to an integer number of KHz; and then
  - (iv) setting said frequency of said periodic signal to be equal to said rounded value.
25. A method as recited in Claim 1, wherein:
  - (i) the rounded value of said periodic signal is lower than the calculated value; and
  - (ii) the rounded value equals 39.000 KHz.
26. A method as recited in Claim 1, wherein:
  - (i) the rounded value of said periodic signal is higher than the calculated value; and
  - (ii) the rounded value equals 40.000 KHz.



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APPENDIX B - EVIDENCE

Not applicable

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**APPENDIX C - RELATED APPEALS**

Not applicable